



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of: )  
Michael Zoeckler ) Examiner: Harmon, Christopher R.  
Serial No.: 09/559,704 ) Art Unit 3721  
Filed: 04/27/2000 ) Docket No: 7137 (R029 1056)  
For: PAPERBOARD CARTONS WITH LAMINATED REINFORCING RIBBONS  
AND METHOD OF MAKING SAME

**TRANSMITTAL OF APPEAL BRIEF**  
(PATENT APPLICATION - 37 C.F.R. 1.192)

1. Transmitted herewith, in triplicate, is the APPEAL BRIEF in this application, with respect to the Notice of Appeal filed on September 1, 2004.

2. STATUS OF APPLICANT

This application is on behalf of  
☒ other than a small entity.

3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 C.F.R. 1.17(c), the fee for filing the Appeal Brief is  
☒ other than a small entity \$340.00

APPEAL BRIEF FEE DUE \$340.00

4. FEE PAYMENT

☒ The Commissioner is hereby authorized to charge the \$340.00 filing fee to deposit account no. 09-0528. A duplicate copy of this sheet is enclosed.

☒ The Commissioner is hereby authorized to charge any additional fees which may be required or credit any overpayment to deposit account no. 09-0528.

11/1/04  
Date

Keats A. Quinalty  
Keats A. Quinalty  
Registration No. 46,426

Customer No. 26158  
WOMBLE CARLYLE SANDRIDGE & RICE, PLLC  
P.O. Box 7037  
Atlanta, Georgia 30357-0037  
(404) 879-2423 (Telephone)  
(404) 879-2923 (Facsimile)

**EXPRESS MAIL**

I hereby certify that this correspondence is being deposited with the United States Postal Service as "Express Mail Post Office To Addressee," in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on November 1, 2004  
Express Mail No. EV 31581712545

Cheryl West



11-2-04

PATENT

AF/3721  
#

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Michael D. Zoekler	)	Examiner: Harmon, Christopher R.
	)	
Serial No.: 09/559,704	)	Art Unit: 3721
	)	
Filed: 04/27/2000	)	Attorney Docket No.: 7137 (R029 1056)
	)	
For: PAPERBOARD CARTONS WITH	)	
LAMINATED REINFORCING RIBBONS	)	
AND METHOD OF MAKING SAME	)	
	)	

**APPEAL BRIEF**

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This brief is submitted in triplicate pursuant to 37 C.F.R. 1.192 in support of the Notice of Appeal filed September 1, 2004 in the above-identified application.

**REAL PARTY IN INTEREST**

The real party in interest in the present application is Graphic Packaging International, Inc. The original application was assigned to Riverwood International Corporation, and subsequently transferred to Graphic Packaging International, Inc., Marietta, Georgia.

**RELATED APPEALS AND INTERFERENCES**

Appellant refers the Board to appeals pending in U.S. Patent Application Nos. 09/971,469 and 09/818,023, which are grandchild and child applications of the present application,

11/03/2004 KBETEMAI 00000126 090528 09559704  
01 FC:1402 340.00 DA

respectively. The appeals in these applications could directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal.

### **STATUS OF CLAIMS**

Claims 1-7, 9-16, and 25-34 are pending in this application and are subject to the present appeal. Claims 17-24 and 36-39 have been canceled as required by the Examiner as drawn to a non-elected invention. Claims 8 and 35 were canceled during prosecution. A copy of claims 1-7, 9-16, and 25-34 as currently pending are set forth in the attached Appendix.

### **STATUS OF AMENDMENTS**

On July 1, 2004, Applicant filed a response to the April 5, 2004 Office Action. In response, the Examiner filed a second, non-final Action on August 25, 2004 based upon the same art. In response, on September 1, 2004, Applicant filed the Notice of Appeal upon which the present Appeal Brief is based.

### **SUMMARY OF THE INVENTION**

In accordance with 37 CFR § 1.192(c)(5), a concise explanation of the presently claimed invention is set forth below. References to pages and lines of the specification are designated "page: lines".

Paperboard cartons of various design and construction have long been used by the packaging industry to package a wide variety of articles such as canned and bottled drinks, food items, detergents, and more. In general, paperboard cartons are erected or converted from paperboard blanks that are die-cut or rotary-cut from long webs of paperboard as the paperboard is drawn progressively from large rolls. Fold lines are scored in the blanks to define the various panels of the cartons and to aid in the conversion of the blanks into their final carton shapes. In some cases, such as in beer and soft drink packaging, the blanks are pre-glued and provided to

packager in the form of substantially flat knocked down sleeves that are erected in a packaging machine into open ended cartons for receiving articles. In other cases, the blanks are provided in a completely flat configuration, in which case the blanks typically are folded around groups of articles and glued by the packaging machine. In either case, the conversion of blanks usually is performed at the time of packaging by specialized conversion stations that are part of large continuous packaging machines. In this way, the flat or pre-glued and knocked down paperboard blanks can be shipped economically to the packager in palletized stacks. [1:24-2:18]

When making paperboard carton blanks from a web of paperboard, the web usually is pre-cut to a specified predetermined width from a wider web of paperboard stock. The pre-cutting of the web to width generally takes place at the paper mill. The width of the web in each case is dictated by the size and shape of the cartons to be made from the web and is specified to the paper mill by a carton fabricator. For example, a web of paperboard stock may have a width of 64 inches whereas a particular carton blank may require a web 48 inches wide. In such an example, a strip of paperboard 16 inches wide (or two strips that total 16 inches in width) typically will be cut from the web of paperboard stock by the paper mill to form the required 48 inch-wide web. These strips, known in the industry as “trim,” traditionally have had reduced value and in some cases are sold at low cost for secondary uses such as the making of shirt collar stiffeners used in the garment industry. In general, the creation of trim in the process of making paperboard web has long been a problem for paperboard manufacturers. [2:19-3:13]

Occasionally, errors by paperboard manufacturers result in rolls of paperboard web that may be substandard for a variety of reasons and thus not usable in the fabrication of paperboard cartons. In other cases, paperboard web manufactured for a particular customer may not meet specifications and thus cannot readily be used. Such substandard and off-spec paperboard is

known in the industry as “cull” and also has had reduced value, sometimes being reconstituted into pulp for making new paper. In general, there has been little use for trim and cull in the paperboard carton making industry. [3:14-3:23]

In many packaging applications, the cartons into which articles are packaged must exhibit enhanced strength at least in selected regions to contain the articles securely. This is particularly true in cases where the articles are relatively heavy and are stacked atop one another in their cartons for shipment and sale. For example, canned and bottled beverages, which typically may be packaged in groups of 6, 12, or 24, are inherently relatively heavy and typically are stacked several cartons high on pallets for shipment to retail stores. The cartons into which these beverages are packed therefore must be strong enough to hold the groups of cans or bottles securely together and to resist tearing or "blowing out" even when under the substantial weight of several layers of stacked cartons. In other applications, such as, for example, cartons of boxed fruit drinks, the cartons themselves must provide at least some of the strength and rigidity necessary to resist crushing when layers of cartons are stacked atop one another. This is because the individual drink containers lack the rigidity of bottles or cans and cannot themselves bear the entire weight of a stack of cartoned fruit drinks. [4:1-4:20]

In applications such as these, traditional paperboard cartons have sometimes proven inadequate to provide the required strength and rigidity. As a result, many packagers have turned to a carton material known in the industry as micro-flute, which is a corrugated paper product. In general, micro-flute is fabricated from a core of paper material formed with a large number of relatively small corrugations sandwiched between facing sheets of flat paper. Micro-flute does tend to provide the strength and rigidity required in many packaging applications; however, it also has significant inherent problems and shortcomings including its generally higher price

compared to paperboard. In addition, carton blanks made of micro-flute can be more expensive in some weights to ship than paperboard blanks because their greater thickness limits the number of blanks that can be stacked on standard sized pallet. Further, in some cases, specialized conversion machinery is required to convert the blanks to cartons, increasing the cost of the packaging process. Finally, the printing of high quality graphics on micro-flute has sometimes proven to be difficult. Thus, micro-flute has not provided a completely satisfactory solution as a carton making material in packaging applications where enhanced carton strength and rigidity is required. [4:21-5:18]

Attempts have been made to improve the strength and rigidity of paperboard cartons to provide a viable alternative to micro-flute where added strength and rigidity are required. These attempts have included laminating two or more webs or sheets of standard thickness paperboard together to create thicker multi-ply paperboard from which carton blanks can be cut. However, while this approach increases the strength and rigidity of resulting cartons, it essentially results in a doubling of the paperboard required per carton and a consequent increase in material and shipping costs. Further, the formation of fold lines in and the folding of multiple ply paperboard cartons is problematic due to the added thickness of paperboard that must be folded. For these and other reasons, such multi-layer laminated paperboard has not proven to be an acceptable alternative to micro-flute. [5:19-6:9]

The fabrication line 11 in Fig. 1 has an upstream end 12 and a downstream end 13 and the various elements used in the making of paperboard blanks according to the invention flow along paths in a direction extending generally from the upstream end toward the downstream end of the line. A large roll 14 of a paperboard web 17 is rotatably mounted on a pair of mandrels 16 located at the upstream end of the fabrication line 11. In carrying out the method of the

invention, the paperboard web 17, which is pre-cut to a required width as described above, is drawn from the roll 17 and advanced along a path, generally indicated by arrows 15, that extends past the various stations of the fabrication line. [15:1-15:12]

Mandrels 18, three of which are illustrated in Fig. 1, are disposed at spaced locations along the path 15 adjacent the upstream end 12 of the fabrication line 11. Ribbons 21 of reinforcing material, each having a width less than the width of the paperboard web 17, are rolled onto relatively narrow rolls 19 and the rolls 19 are rotatably mounted on the mandrels 18. The ribbons 21 of reinforcing material are progressively drawn from the rolls 19 along with the web 17 and initially are disposed atop and move along the path 15 with the web 17. Each of the mandrels 18 may carry multiple rolls 19 of ribbons 21 and each of the rolls 19 may be positioned at any desired location across the width of the mandrel. Further, each of the ribbons 21 of reinforcing material may be cut to any desired width less than the width of the paperboard web 17. [15:19-16:8]

As the web 17 and ribbons 21 are drawn from their respective rolls and advance along the path 15, the ribbons are positioned, according to the locations of their rolls 19 on mandrels 18, at predetermined locations across the width of the web 17. In the configuration illustrated in Fig. 1, for example, the rolls 19 are positioned such that a double layer of ribbons 21 is located adjacent each of the opposed edge portions of the web, a single ribbon is located in the central portion of the web, and a pair of relatively narrow ribbons are disposed on either side of the centrally located ribbon. By appropriately positioning the rolls 19 on the mandrels 18, virtually any placement and configuration of ribbons 21 of reinforcing material may be obtained, as described in more detail below. [16:9-16:21]

As the paperboard web 17 and ribbons 21 advance along the path 15, they move through a traditional de-curling station 22, where the paperboard of the web and ribbons is flattened and any curl that may have been induced by rolling the paperboard onto rolls 14 and 19 is removed. From the de-curling station 22, the web and ribbons advance further along the path 15 to a scoring station 24, which includes a pair of rollers 25 along which one or more scoring wheels 26 are disposed. The scoring wheels 26 are selectively positioned across the width of the rollers 25 to score the web 17 with longitudinally extending fold lines 27, along which carton blanks made by the method of the invention ultimately will be folded when converted into cartons. [17:12-17:23]

With the fold lines 27 scored in the paperboard web 17, the web 17 advances along the path 15 to a pair of guide rollers 31 and the paperboard reinforcing ribbons 21 diverge from the web 17 and advance to a gluing station 28 for receiving adhesive. In the illustrated embodiment, the gluing station 28 comprises an array of traditional adhesive applicators 29, each having a pair of nip rollers 32 between which one or more paperboard reinforcing ribbons pass. The lower nip roller 32 of each of the applicators 29 is partially immersed in an appropriate liquid adhesive contained within a flooded nip bath 33. As the paperboard reinforcing ribbons 21 pass between the nip rollers, a layer of adhesive is transferred from the lower nip roller of each pair to the bottom side (as seen in Fig. 1) of each ribbon 21. An array of three adhesive applicators 29 are illustrated in Fig. 1 for applying adhesive to the seven paperboard reinforcing ribbons in the illustrated embodiment. Fewer or more than three adhesive applicators 29 may be used as necessary depending upon the number and configuration of reinforcing ribbons required in a particular application. [18:14-19:8]



The paperboard web 17 advances from the guide rollers to the compression station 34, which includes a pair main compression rollers 36, that also may function as pull rollers. Likewise, the adhesive bearing paperboard ribbons 21 advance from the gluing station 28 toward the compression station 34 and toward the paperboard web 17. At the compression station 34, the paperboard ribbons 21 and paperboard web 17 pass between the main compression rollers 36. The compression rollers 36 are set to compress the reinforcing ribbons 21 and the web 17 together with sufficient pressure to bond the adhesive and thus the ribbons to the web, or to other underlying ribbons in cases where multiple laminations of ribbons are to be applied to the web 17. In this way, the ribbons are progressively applied to the advancing web of paperboard at selected locations across the width of the web, as determined by the placement of rolls 19 on mandrels 18. [20:1-20:16]

From the compression station 34, the paperboard web 17 with scored fold lines 27 and with the paperboard reinforcing ribbons 21 laminated thereto proceeds toward the downstream end 13 of the fabrication line 11 and toward a cutting station 37. In the illustrated embodiment, the cutting station 37 includes a traditional rotary knife assembly 38, which rotates to cut the web 17 across its width into rectangular sheets of a predetermined size. Each sheet has a width equal to the width of the paperboard web 17 and a length determined by the settings and operation of the rotary knife assembly 38. Means other than a rotary knife such as, for example, a traversing knife assembly or a platen cutter may be substituted for the rotary knife of the illustrated embodiment and these and other means for cutting the web should be considered equivalent to the illustrated rotary knife assembly. [20:17-21:7]

Once the web 17 is cut into sheets 39, the sheets may be stacked and delivered to a die cutter, where the sheets are cut in a standard platen die-cutting operation to form carton blanks

having the various tabs and panels necessary to form paperboard cartons embodying principles and features of the present invention. [21:8-21:13]

As an alternative to cutting the web 17 into sheets 39 and subsequently die-cutting the sheets 39 to form paperboard blanks, the rotary knife assembly 33 in Fig. 1 may be replaced with a platen die cutter or rotary inline die cutter, in which case the web 17 is cut immediately into carton blanks at the downstream end of the fabrication line 11 and the step of first cutting the web into sheets is eliminated. In either case, once the carton blanks are cut, they may be palletized and shipped to product packagers, where the blanks are converted into cartons and packed with articles in the usual way. [21:14-21:23]

When the blanks are converted, the ribbons of reinforcing paperboard laminated to the carton blanks form multiple layers of paperboard in selected portions of the cartons and thus reinforce the cartons in these portions. The locations of the ribbons are carefully determined in advance such that, when the carton blank is converted to a carton, the ribbons and thus reinforcement is provided in selected portions of the cartons such as, for example, in their side walls, where added strength and/or rigidity are required. Reinforced paperboard cartons made by the method of this invention have been found to exhibit strength and rigidity in the reinforced portions that is comparable or superior to that of cartons made from micro-flute. [22:1-22:12]

With the forgoing specific example in mind, it will be appreciated that, in one embodiment, the present invention is a unique method of making reinforced paperboard cartons. The method includes the steps of advancing a web of paperboard along a path, the web of paperboard having a width. At least one ribbon of reinforcing material having a width less than the width of the paperboard web is progressively applied, preferably with adhesive, to the advancing web at a predetermined position across its width. The web with its applied reinforcing

ribbon is cut to form carton blanks and the carton blanks are formed into cartons for receiving articles, the ribbon of reinforcing material providing reinforcement in selected portions of the cartons where added strength is required. [22:13-23:2]

Fig. 8 illustrates another configuration of a reinforced paperboard carton made according to the method of the invention. The end of the carton is shown in cross-section to illustrate better the internal structural components of the carton. The carton 116, which is illustrated as a carton for packaging fruit drink, is generally rectangular in shape and is folded along fold lines 125 to define side walls 117, a bottom wall 118 and a top wall 119. The top wall 119 is formed by overlapping flaps 120 and 121, which may be secured together by any appropriate means such as with adhesive, and may be provided with a cut-out 122 if desired to form a carrying handle. The side walls 117 have outside surfaces formed by respective panels 124. Reinforcing ribbons 123, which preferably also are made of paperboard, are applied to the side wall panels 124 on the inside of the carton according the invention and form the inside surfaces of the side walls 117. As previously discussed, the reinforcing ribbons 123 enhance the structural integrity of the side walls 117 to provide increased strength and rigidity in the sides of the carton for stackability and resistance to carton blow-out. At least one of the reinforcing ribbons 123 is seen to be printed with indicia 127 that is exposed on the inside of the carton and that may become apparent to a consumer as product is removed from the carton. [33:4-34:2]

### ISSUES

1. At issue in the present appeal is whether claims 1-3, 11-16, 25-29, and 34 have been properly rejected under 35 U.S.C. 102(b) as being unpatentable over *Stone* (U.S. Patent No. 5,551,938); whether claims 1, 3-5, 7, 9-11, 16, 25, 29-32, and 34 have been properly rejected under 35 U.S.C. 103(a) as being unpatentable over *Lang* (U.S. Patent No. 5,147,480); and

whether claims 4-7 and 30-33 have been properly rejected under 35 U.S.C. 103(a) as being unpatentable over *Stone* in view of *Stokes* (U.S. Patent No. 1,880,288).

### **GROUPING OF CLAIMS**

The rejections under 35 U.S.C. 102(b) of claims 1-3, 11-16, 25-29, and 34 based upon the *Stone* reference and the rejections under 35 U.S.C. 103(a) of claims 4-7 and 30-33 based upon the *Stone* reference in view of *Stokes* should be grouped together. The rejections under 35 U.S.C. 103(a) of claims 1, 3-5, 7, 9-11, 16, 25, 29-32, and 34 based upon *Lang* should be grouped separately. Thus, the two proposed groups of claims are as follows:

Group 1 (based upon *Stone*): 1-7, 11-16, and 25-34

Group 2 (based upon *Lang*): 1, 3-5, 7, 9-11, 16, 25, 29-32, and 34.

### **ARGUMENT**

#### **A. Group 1**

##### **1. The rejections of claims 1-3, 11-16, 25-29, and 34 as being anticipated by *Stone* are improper and should be reversed.**

The second, non-final Action maintained the base rejections of claims 1-3, 11-16, 25-29, and 34 under 35 U.S.C. 102(b) as being anticipated by *Stone*. In order to reject a claim properly under 35 U.S.C. 102(b), the cited reference must disclose the entire claimed invention.

Specifically, 35 U.S.C. 102(b) states that:

a person shall be entitled to a patent unless...

...(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, ...

In order for a reference to anticipate a claim, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be

inherently present. If each and every element as set forth in the claim is not found in the single prior art reference, the claim is not anticipated and rejections based upon 35 U.S.C. 102 are not supported.

(a) **Stone cannot anticipate claims 1-3, 11-16, 25-29, and 34 since it fails to teach all elements.**

In the August 25, 2004 Office Action, the Examiner stated: “Stone discloses a method for forming carton blanks comprising advancing a web of paperboard 42 along a path; progressively applying, with an adhesive, at least one ribbon of reinforcing material 38 with a width less than the paperboard substantially overlying a selected panel portion (58);....” Additionally, the Examiner’s Response to Arguments section specifies that:

Stone teaches reinforcing substantially all of panel portion 58 by adhering the strip 32 to portions below. Stone provides “the collar 24 may be modified so that the collar is relatively narrow...or relatively wide” (column 6, lines 43-44), thereby adhering to substantially all of panel 58. Furthermore, an alternate embodiment taught by Stone (Fig. 5) comprises tear tape band 26 on the carton 10 not on the collar and a continuous reinforcing strip adhered to the inner surface.

In contrast, in the present application independent claims 1 and 25 teach adhering a reinforcing ribbon to substantially all of a selected panel portion of the paperboard web. For example, claim 1 at step (b) provides:

(b) progressively applying and adhering at least one ribbon or reinforcing material to the advancing web of noncorrugated paperboard, the ribbon having a width less than the width of **the web of noncorrugated paperboard and being positioned to overlie and adhere to substantially all of a selected panel portion of the web;**

*Stone* does not disclose adhesion of a reinforcing ribbon to substantially all of a selected panel portion of the web. In fact, the carton (actually a flip-top box) of *Stone* would be inoperable if the element that the Examiner equates to a reinforcing ribbon (it actually is nothing

more than the collar that aligns the box top) was so adhered. Specifically, on erection of the *Stone* flip-top box carton, panel portion 58 becomes the depending peripheral lips of the openable lid as shown in Fig. 4. Thus, clearly, if the strip 24 were “adhered” to the panel portion 58, the lid would not open because the lips of the lid would be stuck to the rim formed by strip 24.

In *Stone*, a ribbon 38 is press-bonded to a portion of carton material 42. *Stone* specifies in column 3, line 66 through column 4, line 2 that in order to “permit the lid 30 to be raised upwardly from the base section 32 while the collar 24 is retained on the base section 32 (FIG. 4), the collar 24 is adhered to the carton 10 only at locations below the tear strip 27.” *Stone* continues in column 5, lines 3-5 by specifying that “the strip 38 of collar material is simultaneous [sic] cut and scored to produce a collar blank 46 which is also illustrated in FIG. 3. The collar blank 46 is fixedly adhered to the carton blank 44 at locations to the right of the tear-tape band 26 and the tear strip 27 (as viewed in FIG. 3).” Panel portion 58 is at the left of tear-tape band 26 and tear strip 27 in Fig. 3. Thus, since panel portion 58 forms part of the carton flip-top and cannot be adhered to the portion of the collar it overlies (since the carton would not function to open), *Stone* cannot meet the limitations of independent claims 1 and 25, which include a ribbon of reinforcing material “being positioned to overlie and adhere to substantially all of a selected panel portion.”

*Stone* does not disclose a reinforcing ribbon that overlies substantially all of, and adheres to, a selected panel portion. Further, modifying *Stone* to have panel portion 58 adhered to ribbon 38 would destroy the intent and function of the *Stone* box. Thus, rejections based upon *Stone* should be withdrawn as improper.

**2. The rejections of claims 4-7 and 30-33 under 35 U.S.C. 103(a) as being unpatentable over the combination of *Stone* and *Stokes* are improper and should be reversed.**

The August 25, 2004, second, non-final Office Action maintained the rejection of claims 4-7 and 30-33 under 35 U.S.C. 103(a) as being unpatentable as obvious over *Stone* in view of *Stokes*. The basic test for non-obvious subject matter is whether the claimed subject matter would have been obvious to a person having ordinary skill in the art to which the subject matter pertains in contemplation of the prior art. The United States Supreme Court in Graham v. John Deere & Co., 383 U.S. 1 (1966), set forth the factual inquiries to be considered:

- (1) determining the scope and contents of the prior art;
- (2) ascertaining the differences between the prior art and the claims at issue;
- (3) resolving the level of ordinary skill in the pertinent art.

In determining the scope and content of the prior art, the Examiner must first consider the nature of the problem on which the inventor was working. Once this has been established, the Examiner must select, for purposes of comparing and contrasting with the claims at issue, prior art references that are reasonably pertinent to that problem (e.g., the inventor's field of endeavor). See Heidelberger Druckmaschinen AG v. Hantscho Commercial Products, Inc., 21 F.3d 1068, 1071 (Fed. Cir. 1994). In selecting and applying/combining references, hindsight must be avoided at all costs.

The second factor described in Graham requires ascertaining the differences between the cited prior art and the claims at issue. In the instance case, the references fail to disclose the claimed invention, that is, claimed elements are absent.

In resolving the level of ordinary skill in the pertinent art, as required by the third factor of Graham, the Examiner must place himself into the shoes of a person of ordinary skill in the art

at the time the invention was made. The hypothetical person skilled in the art is one who thinks along lines of conventional wisdom in the art and one who does not have the benefit of hindsight.

In order to establish a *prima facie* case of obviousness, it is necessary for the Examiner to present evidence, preferably in the form of some teaching, suggestion, incentive, or inference in the applied prior art, or in the form of generally available knowledge that one having ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. Ex parte Levengood, 28 USPQ2d 1300, 1301 (Bd. Pat. App. & Interf. 1993); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). The legal conclusion of obviousness must be supported by facts or it cannot stand. See Graham. A rejection based on 35 U.S.C. § 103(a) therefore clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art or “viewed after the event.” Goodyear Co. v. Ray-O-Vac Co., 321 U.S. 275, 279, 64 S.Ct. 593, 88 L.Ed. 721 (1944). The proper inquiry thus is whether bringing the references together was obvious and not, whether one of ordinary skill, having the invention before him, would find it obvious through hindsight to construct the invention. Accordingly, an Examiner cannot establish obviousness by locating references that describe various aspects of the pending application’s invention without also providing evidence of the motivating force that would lead one skilled in the art to do what the inventor has done.



Applying these legal principles to the present case, the Examiner states on page 3 of the second, non-final Office Action that:

Claims 4-7 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stone (US 5,551,938) in view of Stokes (US 1,880,288).

Stone does not disclose a plurality of reinforcing ribbons, however Stokes teaches reinforcing carton blanks with ribbons t (see figures 1-1a). It would have obvious to one of ordinary skill in the art to use the teachings of Stokes in the invention [of] Stone in order to reinforce more than one side of the carton.

Appellant continues to traverse the Examiner's rejection because *Stone* and *Stokes* cannot be combined as averred and, in the event such combination can be made, the resulting combination would not render the claims obvious. As noted above, the rejection of the independent claims based upon the *Stone* reference under 35 U.S.C. 102(b) are improper since *Stone* fails to disclose each and every element of the claimed invention and cannot be modified to arrive at the claimed invention without destroying the functionality of the *Stone* box. *Stokes* fails to make up for the inadequacies of *Stone*, as it fails to teach or suggest the claimed ribbon of reinforcing material that overlies and adheres to substantially all of a selected panel portion. Additionally, there is no motivation to combine the teachings of *Stokes* with *Stone* since neither *Stone* nor *Stokes*, nor any art of record, provides a suggestion, motivation, or impetus for making such a combination. In fact, there cannot logically be any motivation to adhere the rim 24 of *Stone* to the panel 58, regardless of the secondary art, because one is never motivated to perform a non-functional modification. Without such teaching, suggestion, or motivation, the combination rejection cannot stand as applied.

**B. Group 2**

**1. The rejections of claims 1, 3-5, 7, 9-11, 16, 25, 29-32, and 34 under 35 U.S.C. 103(a) as being unpatentable over *Lang* are improper and should be reversed.**

The August 25, 2004 second, non-final Office Action reduced the rejection of claims 1, 3-5, 7, 9-11, 16, 25, 29-32, and 34 from a 35 U.S.C. 102(b) rejection, as applied in the first Office Action dated April 5, 2004, to a rejection under 35 U.S.C. 103(a) as being unpatentable over *Lang*. The rejections under 35 U.S.C. 103(a) based upon the *Lang* reference are improper and should be withdrawn.

**(a) *Lang* fails to teach or suggest each and every element of the claims.**

The Examiner reduced from 35 U.S.C. 102(b) to 35 U.S.C. 103(a) his single reference rejection of the claims with *Lang*. Specifically, the Examiner states that:

Lang discloses a method of making paperboard cartons comprising advancing a web of paperboard 48 to a laminator/reinforcer which applies at least one layer of material to the paperboard; see figures 3 and 4. The web is then cut/scored and then formed into cartons. Lang discloses printing on the reinforcing layers. Lang does not disclose the use of laminating non-corrugated material, however the examiner takes OFFICIAL NOTICE that at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the method of Lang on non-corrugated paperboard.

Appellant continues to traverse the rejections based upon *Lang* since *Lang* fails to teach or suggest the claimed lamination of the ribbon of reinforcing material directly to another web of non-corrugated material over substantially all of a panel portion. *Lang* merely teaches applying a “finishing layer” onto a corrugated material, with the majority of its disclosure detailing application of a finished layer to a “double backing layer” of a corrugated material. The double backing layer is the side of the corrugated material that will become the outside of a box. Although *Lang* mentions the possibility of applying the finish layer directly to the corrugated

core to form both the finish layer and the double backing layer, *Lang* labels this method inferior and teaches against its use. Regardless, the finish layer in *Lang* is not applied to a non-corrugated web of paperboard as claimed in the present application.

*Lang* fails to disclose, teach, or suggest applications to non-corrugated paperboard. The driving purpose of the present invention is to produce a paperboard carton that is not corrugated in certain cartons where corrugated is not practical or viable. In order to do this, certain panel portions of the carton blank must be enhanced in strength beyond their inherent strength. Because *Lang* teaches standard corrugated paperboard, the finish layer therein does not need to provide reinforcement, is not applied for this purpose, and does not teach such strength enhancement. The present invention is concerned with providing an alternative to corrugation, which typically is much more costly to produce. Corrugated products suffer from many other disadvantages, including being more expensive to ship, since the greater thickness of corrugated materials limits the number of blanks able to be stacked on pallets. Corrugated materials also require specialized machinery to convert the corrugated blanks to cartons and lack the capability of printing high quality graphics thereon. The commercial success in the industry of products formed by the presently claimed method is yet another indication (a “secondary indicia of non-obviousness”) that the present invention is non-obvious and thus a patentable advance over corrugated products, such as those detailed in *Lang*. Thus, the rejections under 35 U.S.C. 103(a) based on the *Lang* reference should be withdrawn as moot since *Lang* fails to disclose or suggest each and every claimed element of independent claims 1 and 25.

Cartons made according to the present invention have enjoyed substantial commercial success as detailed in the Declaration Under 37 CFR 1.132 of Steve McLary as filed with the Preliminary Amendment accompanying the RCE filed March 15, 2004. Such commercial

success is strong evidence of non-obviousness. The Declaration of Steve McLary details substantial and growing sales of the present product in the industry.

The methods of *Lang* are at least two steps removed from the claims of the present application, with micro-flute being a not completely successful attempt to address the drawbacks of using corrugated materials as taught by *Lang*. These other products have been introduced in place of corrugation to improve strength while reducing costs. The very fact that micro-flute was developed as an alternative to corrugation is an attempt by others to solve the problems addressed by the method of the present invention in an inferior way. Certain segments of the packaging industry (e.g. drink cartons) are not suitable for corrugated boxes or even micro-flute, but nevertheless require high strength containers that can be stacked. Although micro-flute was an attempted replacement for corrugation, it is more expensive than cartons according to the present invention, heavier, and not compatible with much packaging machinery. The method of the present invention produces a non-corrugated container that is compatible with current packaging machinery, that is much less expensive than micro-flute or corrugation, and that is substantially stronger than single sheet paperboard cartons to enhance stackability.

**(b) A prima facie case of obviousness has not been shown.**

As the Examiner has acknowledged, *Lang* does not teach or suggest the use of laminating non-corrugating material as taught by the claims. The Examiner's taking of OFFICIAL NOTICE is simply supposition and is clearly improper. According to MPEP 2142, the Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the Examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of non-obviousness. To establish a prima facie case of obviousness, the three basic criteria enumerated in the Graham test above must be met. The initial burden is on the Examiner to

provide some suggestion of the desirability of doing what the inventor has done. To support the conclusion that the claimed invention is directed to obvious subject matter, the references must either expressly or impliedly suggest the claimed invention or the Examiner must present a convincing line of evidence as to why the claimed invention would have been obvious in light of the teachings of the reference. If the prima facie case of obviousness has not been met and is traversed by the applicant, the burden shifts back to the Examiner to establish that a prima facie case of obviousness is met.

Since the rejections based upon *Lang* alone are applied under 35 U.S.C. 103(a), the suggestion to modify the reference to reach the metes and bounds of the claimed invention must be disclosed in *Lang* or must be obvious and actually “well known” in the art. Appellant traverses the rejections under 35 U.S.C. 103(a) by *Lang* since *Lang* fails to disclose each and every element and thus a prima facie case has not been established. Further, Appellant avers that the reliance by the Examiner on common knowledge in the art is improper in view of MPEP 2144.03, which provides that an Examiner should take official notice without documentary evidence to support a conclusion only in certain circumstances:

Official Notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known....It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. In Re Ahlert, 424 F.2d at 1091, 165 USPQ at 420-21.

MPEP 2144.03 further asserts that if the applicant challenges a factual assertion is not properly officially noticed or not properly based upon common knowledge, the Examiner must support the

finding with adequate evidence. If the applicant adequately traverses the Examiner's assertion of official notice, the Examiner must provide documentary evidence if the rejection is to be maintained.

As noted above, the Appellant maintains, and has maintained, that *Lang* fails to disclose each and every element of the claimed invention. Specifically, *Lang* fails to disclose the lamination of a ribbon of reinforcing material directly to another web of non-corrugated material over substantially all of a panel portion thereof. In fact, the Examiner agrees that *Lang* fails to disclose the use of laminating non-corrugated material. Accordingly, the Examiner's taking of OFFICE NOTICE is improper as applied and rejections based upon *Lang* should be removed as improper and moot.

### **CONCLUSION**

Claims 1-3, 11-16, 25-29, and 34 are not anticipated by *Stone* under 35 U.S.C. § 102(b). Claims 1, 3-5, 7, 9-11, 16, 25, 29-32, and 34 are not rendered obvious by *Lang* under 35 U.S.C. § 103(a). Claims 4-7 and 30-33 are not rendered obvious by *Stone* in view of *Stokes* under 35 U.S.C. 103(a).

For the foregoing reasons, the rejections of claims 1-7, 9-16, and 25-34 by the U.S. Patent and Trademark Office are in error. Reversal of the rejections and allowance of the application is respectfully requested.

Respectfully submitted,

11/1/04  
Date

Keats A. Quinalty  
Keats A. Quinalty  
Reg. No. 46,426  
Attorney for Appellant

WOMBLE CARLYLE SANDRIDGE & RICE, PLLC  
P.O. Box 7037  
Atlanta, Georgia 30357-0037  
(404) 879-2423 (Telephone)  
(404) 879-2923 (Facsimile)

EXPRESS MAIL

I hereby certify that this correspondence is being deposited with the United States Postal Service as "Express Mail Post Office To Addressee," in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on November 1, 2004.

Express Mail No. EV 315 817 125 US

Cheryl West



## APPENDIX

1. A method of making paperboard cartons with selectively reinforced panels, said method comprising the steps of:

(a) advancing a web of noncorrugated paperboard along a path, the web of noncorrugated paperboard having a width and longitudinally extending panel portions that will become panels separated by fold lines in completed paperboard cartons;

(b) progressively applying and adhering at least one ribbon of reinforcing material to the advancing web of noncorrugated paperboard, the ribbon having a width less than the width of the web of noncorrugated paperboard and being positioned to overlie and adhere to substantially all of a selected panel portion of the web;

(c) cutting the web of noncorrugated paperboard to form carton blanks having panels;  
and

(d) forming the carton blanks into cartons for receiving articles, the ribbon of reinforcing material reinforcing at least one panel of the cartons.

2. A method of making reinforced paperboard cartons as claimed in claim 1 and where in step (b) the at least one ribbon of reinforcing material is a ribbon of paperboard.

3. A method of making reinforced paperboard cartons as claimed in claim 1 and wherein step (b) further comprises advancing the at least one ribbon of reinforcing material along a path, applying adhesive to the advancing ribbon, and progressively bringing the ribbon into engagement with the advancing web of noncorrugated paperboard to adhere the ribbon to the web.



4. A method of making reinforced paperboard cartons as claimed in claim 1 and wherein step (b) comprises applying a plurality of ribbons of reinforcing material to the advancing web of noncorrugated paperboard, each of the ribbons of reinforcing material being positioned to overlie substantially all of a selected panel portion of the web.
5. A method of making reinforced paperboard cartons as claimed in claim 4 and wherein the web of noncorrugated paperboard has panel portions extending along opposed edge portions and wherein at least one of the plurality of ribbons of reinforcing material is positioned to overlie substantially all of a panel portion extending along an opposed edge portion of the web of paperboard.
6. A method of making reinforced paperboard cartons as claimed in claim 4 and wherein step (b) further comprises applying and adhering a first ribbon of reinforcing material to said web of noncorrugated paperboard overlying substantially all of a panel portion thereof and applying and adhering a second ribbon of reinforcing material atop the first ribbon of reinforcing material to form a double thickness of reinforcing material overlying the panel portion of the web.
7. A method of making reinforced paperboard cartons as claimed in claim 4 and wherein the web of noncorrugated paperboard has opposed edges and a panel portion intermediate the opposed edges, and wherein at least one of the ribbons of reinforcing material is positioned to overlie substantially all of the panel portion intermediate the opposed edges of the web.

8. (Canceled)

9. A method of making reinforced paperboard cartons as claimed in claim 1 and further comprising the step of printing indicia on the at least one ribbon of reinforcing material, the indicia being visible from the inside of cartons formed in step (d).

10. A method of making reinforced paperboard cartons as claimed in claim 9 and wherein the indicia is printed on the at least one ribbon of reinforcing material before the ribbon is applied and adhered to the web of noncorrugated paperboard in step (b).

11. A method of making reinforced paperboard cartons as claimed in claim 1 and further comprising the step of scoring fold lines between panel portions of the web of noncorrugated paperboard along which the carton blanks are folded in step (d) to form cartons.

12. A method of making reinforced paperboard cartons as claimed in claim 11 and where in step (b) the at least one ribbon of reinforcing material is positioned on the web so as not to cover a fold line.

13. A method of making reinforced paperboard cartons as claimed in claim 12 and wherein the at least one ribbon of reinforcing material has an edge and wherein the step of scoring fold lines includes forming at least one fold line adjacent the edge of the ribbon.

14. A method of making reinforced paperboard cartons as claimed in claim 1 and where in step (b) the at least one ribbon of reinforcing material comprises paperboard trim.

15. A method of making reinforced paperboard cartons as claimed in claim 1 and were in step (b) the at least one ribbon of reinforcing material comprises paperboard cull.

16. A reinforced paperboard carton made by the method of claim 1.

17.-24. (Canceled)

25. A method of making paperboard carton blanks comprising the steps of:

(a) advancing a web of noncorrugated paperboard along a path, the web of paperboard having a width and longitudinally extending panel portions that will become panels separated by fold lines in completed carton blanks;

(b) laminating a ribbon of reinforcing material to the advancing web of noncorrugated paperboard, the ribbon having a width less than the width of the web of noncorrugated paperboard and being positioned on, and adhered to, substantially all of a longitudinally extending panel portion of the web of noncorrugated paperboard; and

(c) cutting the web of noncorrugated paperboard and laminated ribbon across their length into carton blanks having panels, the laminated ribbon reinforcing at least one panel of each of the carton blanks.

26. A method of making paperboard carton blanks as claimed in claim 25 and where in step (b) the ribbon of reinforcing material is a ribbon of paperboard.
27. A method of making paperboard carton blanks as claimed in claim 26 and wherein the ribbon of paperboard is paperboard trim.
28. A method of making paperboard carton blanks as claimed in claim 26 and wherein the ribbon of paperboard is paperboard cull.
29. A method of making paperboard carton blanks as claimed in claim 25 and wherein step (b) comprises advancing the ribbon of reinforcing material along a path, applying adhesive to the ribbon of reinforcing material, and bringing the ribbon into contact with the web to adhere the ribbon to the web.
30. A method of making paperboard carton blanks as claimed in claim 25 and wherein step (b) comprises laminating more than one ribbon of reinforcing material to the advancing web of noncorrugated paperboard, each ribbon having a width less than the width of the web of noncorrugated paperboard and being positioned within corresponding longitudinally extending panel portions of the web of paperboard to provide reinforcement in selected panels of the blank.
31. A method of making paperboard carton blanks as claimed in claim 30 and wherein panel portions extend along opposed edges of the noncorrugated paperboard web and wherein at least

one of the ribbons of reinforcing material is positioned within a panel portion along an edge of the web of noncorrugated paperboard.

32. A method of making paperboard carton blanks as claimed in claim 30 and wherein the web of noncorrugated paperboard has opposed edges wherein a panel portion extends along the web intermediate the opposed edges, at least one of the ribbons of reinforcing material being applied within the panel portion intermediate the edges of the web of noncorrugated paperboard.

33. A method of making paperboard carton blanks as claimed in claim 30 and wherein at least one of the ribbons of reinforcing material is applied atop another one of the ribbons of reinforcing material within the panel portion to form multiple layers of reinforcing material within the panel portion of said web of noncorrugated paperboard.

34. A paperboard carton blank made by the process of claim 25.

35.-39. (Canceled)